Oregon Status Factors

Elcode IMGASG3230

Gname FLUMINICOLA SP 11

Gcomname NERITE PEBBLESNAIL

Number of Occurrences

A = 1 - 5

Comments Collected from three springs in two creeks (Frest and Johannes, 1999; 2000).

Number of Occurrences with Good Viability

B = Very few (1-3) occurrences with good viability

Comments Three spring sites in two creeks tributary to the Klamath River, Jackson County, Oregon (Frest and Johannes, 2000).

Population Size

U = Unknown

Comments

Range Extent

A = <100 km2 (less than about 40 square miles)
B = 100-250 km2 (about 40-100 square miles)

Comments Uncertain; likely a narrow endemic, confined largely to a few spring runs in tributaries to the middle Klamath drainage, Jackson County, Oregon (Frest and Johannes, 1999). Appears to be restricted to two creeks in the Klamath River system in southwestern Oregon. Surveys of springs in surrounding drainages have not found this taxon (Frest and Johannes, 1999).

Area of Occupancy

A = <0.4 km2 (less than about 100 acres)

LA = <4 km (less than about 2.5 miles)

Comments This narrowly endemic species is known from Fredenburg Spring on lands administered by Medford District BLM in Jackson County, Oregon, which is tributary to the middle Klamath drainage. Found at several sites in and flanking the Jenny Creek drainage, southeastern Jackson County (Frest and Johannes, 1999). Frest and Johannes (2000) have completely covered most of the Jenny and Fall Creek systems and adjoining creek drainages, confirming the extreme localization of this species.

Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments Unknown

Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Short-term trend in population, range, area occupied, and number and condition of occurrences unknown.

Comments Unknown

Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

Scope High Severity High Immediacy High

Comments This species has been affected by grazing, water diversions, and road building. It occurs in limnocrene habitats in or adjacent to Upper Klamath Lake, where it has been exposed to additional disturbances like dredging, log storage and transport, and eutrophication and pollution associated with agricultural, urban, and industrial pollution. Threats include: Chemical spills and other forms of water pollution (e.g., livestock use of springs and spring runs, urban runoff, other agriculture, other industrial) resulting in effects such as: (1) direct mortality of species as evidenced by the recent (1991) Cantara Spill on the Upper Sacramento River, and (2) deleterious habitat alterations resulting from factors such as eutrophication caused by excessive nitrogen and phosphorus levels, reduced dissolved oxygen levels, or elevated water temperatures. Water diversions for such activities as irrigation and livestock watering results in reduced spring flow and thus less habitat for these snails. Dam construction that submerges cold springs, slows current velocities, lowers the availability of oxygen and allows fine sediments to accumulate is also a threat. For example, dams on the Columbia River have likely submerged sites formerly occupied by other snail species. Excessive sedimentation from a variety of activities such as logging, mining, road and railroad grade construction, and grazing may smother substrates preferred by these species and may impair egg-laying or survivorship of eggs or young. Many other springs in the surrounding area have been completely trampled out by grazing cattle (Frest and Johannes, 1999).

Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

Comments There are no known protected occurrences in Oregon. Sites are on private, Weyerhauser, U.S. Timberlands, and Medford District BLM Lands (Frest and Johannes, 2000).

Intrinsic Vulnerability

A = Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (> 20 years or 5 generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are highly susceptible to changes in composition and structure that rarely if ever are reversed through natural processes even over substantial time periods (> 100 years).

Comments Individuals have a life span of one year, with 90 percent or more of the population turning over annually. Surviving individuals are generally those that did not breed during their first year. Eggs are laid in the spring and hatch in approximately 2-4 weeks. Sexual maturity is reached by late summer, after a few months of growth. Individuals overwinter as adults and do not disperse widely, so populations remain very localized in their distribution (Frest and Johannes, 1999).

Environmental Specificity

A = Very Narrow. Specialist or community with key requirements scarce.

Comments Occurs in narrow and shallow small cold spring runs, on cobbles and gravel. Associated with

Mimulus and Rorippa. Appears to be an obligate crenocole (Frest and Johannes, 1999).

Other Considerations

ORNHIC List 1. At this time, all populations on Forest Service or BLM administered lands are considered important to maintain species habitats. Listed as Fluminicola n. sp. 10 in Frest and Johannes (2000).

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Greasons

Limited number of occurrences. There are no known protected occurrences in Oregon.

BCD Sources

New Sources

Frest, T.J. and E.J. Johannes. 1999. Field Guide to Survey and Manage Freshwater Mollusk Species. Bureau of Land Management, Oregon State Office, Portland, Oregon. 117 pp.
Frest, J.T. and E.J. Johannes. 2000. A baseline survey of southwestern Oregon, with emphasis on the Rogue and Umpqua River drainages. Year 2000 Report prepared for Oregon Natural Heritage Program, Portland, Oregon. 403 pp.